IN THE ABSTRACT

A method and device for facilitating execution of tasks of a parallel job is disclosed. Parallel jobs comprise multiple tasks that can be executed in parallel by separate resources to produce an exit status for each task. The resource manager receives the jobs and dispatches the parallel tasks of the job together with task starters to a job launcher unit. The job launcher unit starts the task starters on the selected resources. Each task starter is associated with a task and commences execution of the task on the selected resource. At commencement of a task, the task starter sends the host and process identifier to the resource manager. At completion of the task, the task starters collect the exit status of the task from the associated resource and send the exit status of the task back to the resource manager. An external event unit associated with the resource manager receives the process identifier and exit status of the tasks from the task starter. Prior to dispatching the job, the resource manager generates command instructions identifying the host containing the resources for executing the task, and the location for returning the process identifier and exit status of a completed task. A copy of a portion of the command instructions is kept at the resource manager. The task starter sends to the resource manager the process identifier when the task starter commences execution of the task on the resource, and the exit status of the task when the task is completed.